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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/716,512	11/20/2003	Koichiro Inoue	INOU3001/JEK	5617

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EXAMINER	
YEE, DEBORAH	
ART UNIT	**PAPER NUMBER**
1742	

DATE MAILED: 01/03/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/716,512	INOUE ET AL.	
	Examiner	Art Unit	
	Deborah Yee	1742	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 October 2005*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-7* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-7* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 January 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1 to 7 have been considered but are moot in view of the new ground(s) of rejection.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1 to 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Robelet et al (US Patent 5,769,970) in view of ASM teaching by Vander Voort and Japanese patent 09-111412 (cited in IDS dated 3-18-04)

4. Robelet in claim 1 of column 6 discloses a microalloyed steel having a composition with constituents whose wt% ranges overlap those recited by the claims; such overlap in wt% ranges establishes a prima facie case of obviousness because it would be obvious to one of ordinary skill in the art to select the claimed alloy ranges from the broader disclosure of the prior art since the prior art has the same utility (connecting rod produced by fracture splitting). See MPEP 2144.05.

5. Even though 0.001 to 0.01% oxygen as recited by claims 1 and 4 is not taught by prior art, such would not be a patentable difference. Note that Vander Voort in figure 1

discloses that controlling oxygen amounts from 0.001 to 0.0037% in low alloy steel enhances toughness which is measured by Charpy impact test. Since toughness is desired and sought by prior art, then it would be an obvious modification in view of the Vander Voort teaching to restrict oxygen content to 0.001 to 0.0037% to produce no more than the known and expected effect of such an addition.

6. Even though up to 0.02% Ti and up to 0.02% Zr recited by claims 2 and 5 are not disclosed by prior art, such would not be a patentable difference since they are optional elements having a lower limit of zero. Note "up to" is equivalent to zero. Moreover, it is well known in the art to incorporate small amounts of Ti into microalloy steels rods for fracture splitting as evident by JP'412, paragraph 32 on page 4 to increase strength and hardness. Since such properties are desired and sought by Robelet, then it would be an obvious modification for skilled in the art to incorporate small amounts to Robelet alloy to produce no more than the known and expected effect of such addition. Moreover, Zr is in the same family as Ti in the Periodic Table; hence they have the same chemical make-up and would be used interchangeably.

7. Robelet in claim 1 teaches machining element additions such as lead; and hence meet claims 3 and 6.

8. Robelet on lines 5 to 62 in claim 1 discloses using steel as a connecting rod for an engine produced by fracture splitting and hence meet claim 7.

9. Robelet on lines 45 to 65 of column 5 discloses a connecting rod steel example which closely meets the claimed composition and when calculated, has a Ceq=0.79 and Ttr = 0.645 which meet the recited claims. Even though prior art does not teach the

claimed equations, such would not be a patentable difference. Note that it has been held that there is no invention involved in the discovery of a general formula if it covers or closely covers a composition . Moreover, specific prior art example contains 0.105% V but such element would be obvious to omit since a broad range of zero to 0.2% is taught, see lines 36 to 40 in column 3.

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deborah Yee whose telephone number is 571-272-1253. The examiner can normally be reached on Monday-Friday from 6:00 to 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Roy King can be reached on 571-272-1244. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Deborah Yee
Primary Examiner
Art Unit 1742

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